# Records Management: Management Now and in the Future

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**June 13, 2001**

# Overview of Today's Presentation

- External Environment
- NARA's View of Electronic Records (Context for the E-Sig Presentation)
- A Summary of the Major Points of GPEA
- NARA's Future: ERA

# The External Environment - I

- GPEA - Electronic transactions
  - Interoperability & document exchange
  - Web enabled government
- Rising customer expectations
- Mixed customer requirements

# The External Environment - II

- Concern for computer security
- Concern for privacy
- Concern for government accountability
- Increased litigation r

# All Records Are Not Equal

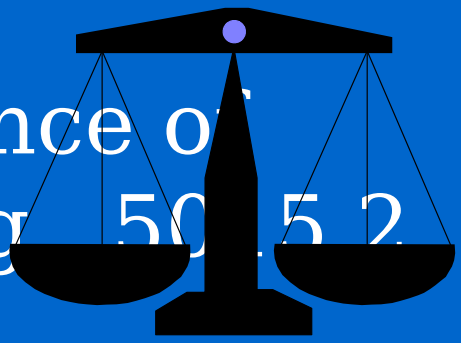
- Much of what we create qualifies as a record under the federal definition.
- To serve as a record of business activity the records must be trustworthy
  - Reliability
  - Integrity
  - Authenticity
  - Usability
- Adequate and proper documentation doesn't mean everything must be retained forever.

# The Policy Challenges

- Defining what is an electronic record
- Defining a “trustworthy” electronic record
- Determining what records management theory applies and what must be replaced
- Developing standards
- The relationship of records management to legal and security issues
- Balancing multiple requirements and costs

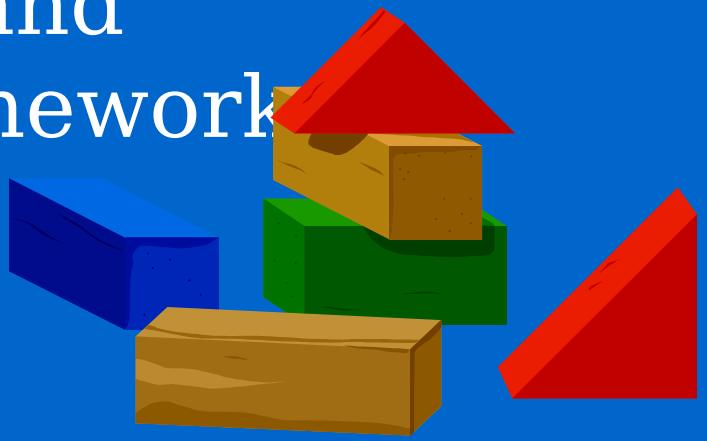
# NARA's Core Policy Ideas - I

- Policy must balance:
  - Electronic records as one part of overall documentation
  - Special character of electronic records - they are separate and equal records
- Steer not row - importance of best practices, e.g. 5015.2



# NARA's Core Policy Ideas - II

- Records Management is not a stand-alone concept
- Trustworthy electronic records
- Content, context, and structure as framework

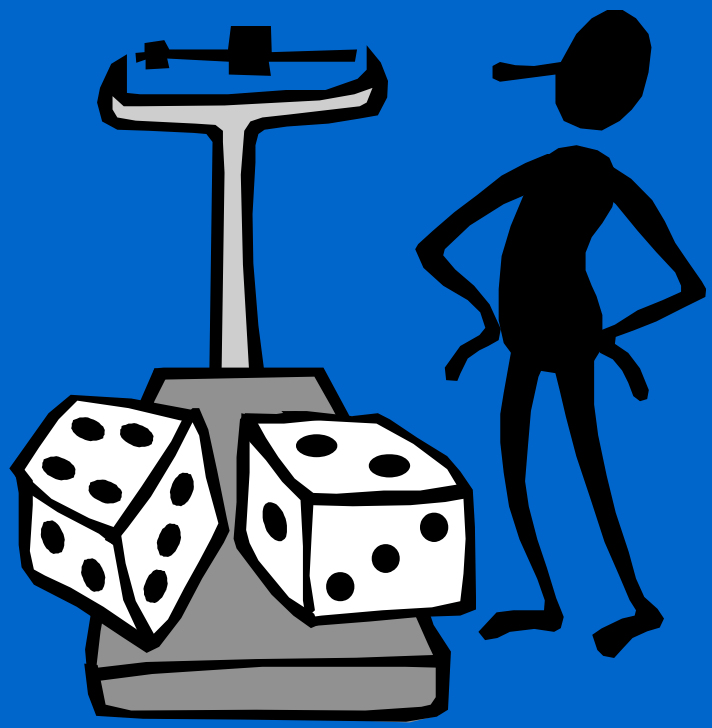


# Implementing Records Management - I

- A joint approach to records management policy
  - Agency responsibilities
  - NARA responsibilities
  - Other agencies
- A team approach to implementation

# Implementing Records Management - II

- The importance of business needs in determining levels of documentation
- Implementation as risk based



# What Does NARA Mean By Electronic Recordkeeping?

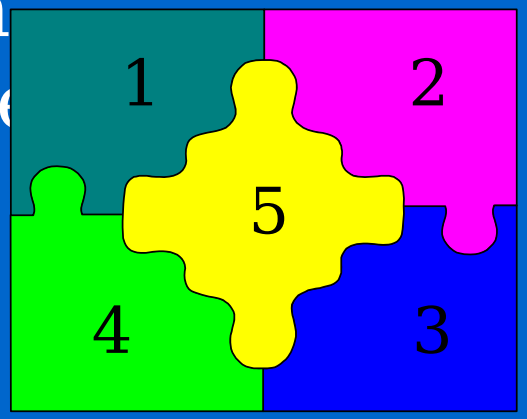
- Creating and maintaining records in electronic form so that those records can successfully serve as the records to meet an agency's legal, fiscal, administrative, and other business needs, and when necessary be preserved permanently as part of our Nation's historical record

# Does GPEA Require ERK?

- E-Government means records are created
- NARA does feel that E-Government and electronic recordkeeping fit together well
- It makes more sense to maintain the records created electronically in electronic form, but that is not a requirement.
- NARA sees its role as the advocate for addressing recordkeeping issues.

# Components of a Recordkeeping System

- The records themselves
- A system of organization of the records
- Policies and procedures for management
- A program to train staff on using the records and syste
- An audit program to ensure compliance



# These Ideas Are Not Absolutes

- Based on business needs
  - Administrative, legal, fisc
  - Oversight
  - Appropriate public access
  - Historical preservation
- Based on assessment of ri
- No different from paper

# Paperwork Elimination Act (GPEA)

PL 105-277 (Title VII)

- Agencies to automate interactions with outside partners/customers by October 2003 to the extent practicable.
- OMB, in consultation with Commerce, Justice, Treasury & NARA, to promulgate policies and procedures within 18 months.
- Procedures are to encourage both electronic filing and electronic recordkeeping, particularly by employers.

# Signature: UCC Definition (§ 1-201(39))

- *Any symbol executed or adopted by a party with present intention to authenticate a writing.*

# Legal Effect and Validity

*Electronic records submitted or maintained in accordance with procedures developed under this title, or electronic signatures or other forms of electronic authentication used in accordance with such procedures, shall not be denied legal effect, validity, or enforceability because such records are in electronic form.*

-GPEA, section 1707

# Other GPEA Guidance

- OMB - http://www.cio.gov/docs/gpea2.htm
- Dept. of Treasury
  - http://www.fms.treas.gov/eauth/index.html
- Dept. of Justice
  - http://www.cio.gov/docs/eprocmemo.htm
- Dept. of Commerce
  - http://csrc.nist.gov/publications/nistpubs/index.html

# Executive Summary Points (1 of 2)

- Agencies must consider RM when implementing GPEA
- E-sig systems will produce new records or augment existing records
- Various approaches ensure trustworthy e-signed records
- Agencies must maintain trustworthiness of e-signed records over time

# Executive Summary Points (2 of 2)

- Use of 3rd party contractors in implementing e-sig systems raise adequacy of documentation issues
- Scheduling issues must be addressed before disposing of e-sig records
- Records disposition authorities of e-signed records may need to be modified
- Permanent e-signed records documenting legal rights have special considerations

# Content, Context & Structure of E-signed Records

- Content
  - The e-signature is part of the content of the e-signed record
- Context
  - Records used to verify the reliability and authenticity of the e-signed record
- Structure
  - Records used to re-validate the e-signed record

# Examples of New Record Types (1 of 2)

- Content
  - E-signatures
  - Documentation of individual identities
- Context
  - Documentation of individual identities
  - Trust verification records (audit trails)
  - Certificates
  - Certificate revocation lists
  - Trust paths

# Examples of New Record Types (2 of 2)

- Content (cont.)
  - Certificate policies
  - Certificate practice statements
- Structure
  - Hashing algorithms
  - Encryption algorithms

# Possible Authentication Alternatives

- Maintaining adequate documentation of e-sig validity gathered at or near the time of signing
- Maintaining the ability to re-validate e-sigs
- Maintain log file of e-signed record acceptability at time of receipt
- Other alternatives may exist
- Agency selects method based on business need & risk analysis

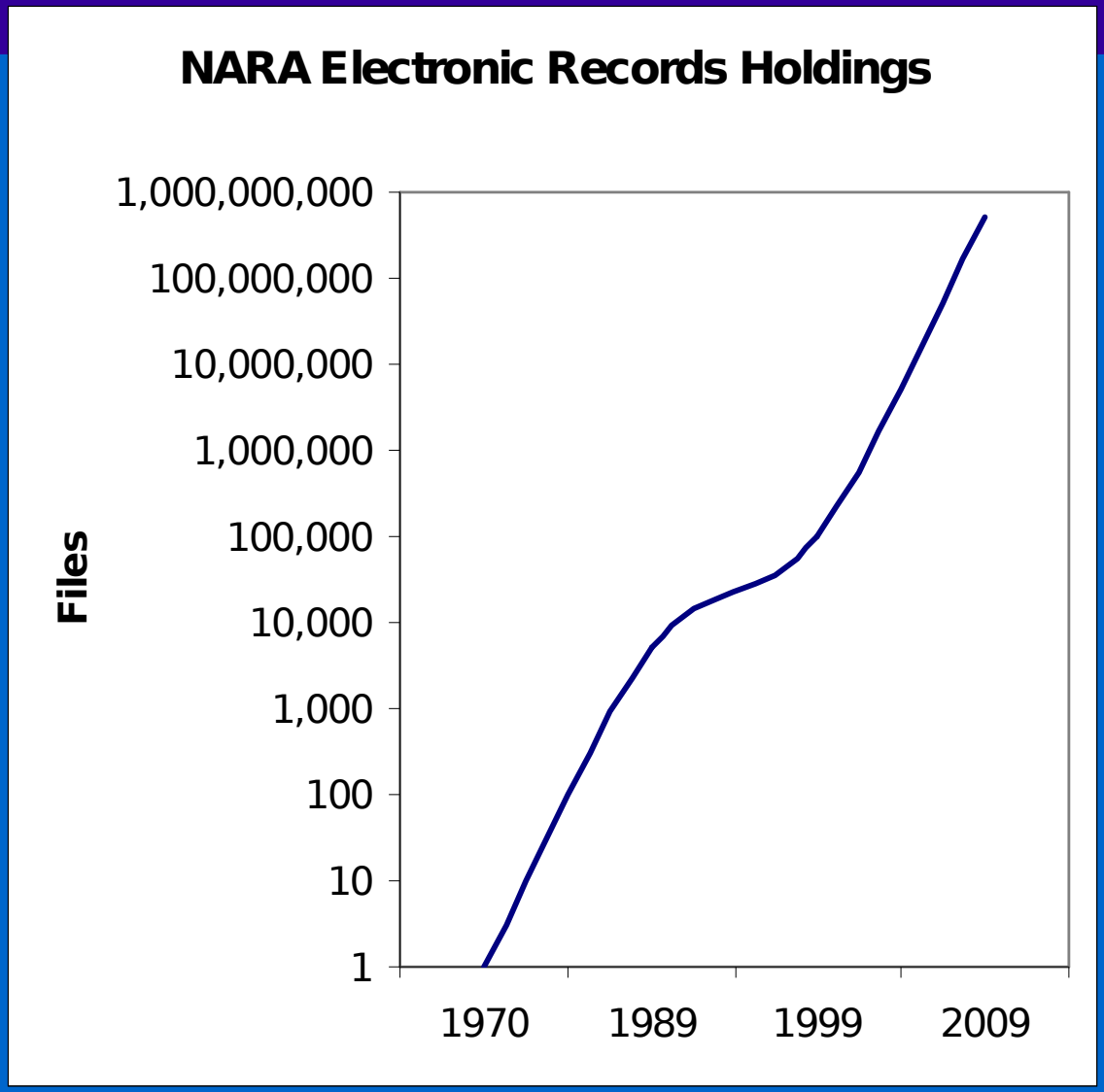
# Scheduling E-signed Records Is Necessary When…

- New content, context or structure records (as determined by your risk analysis/ business practices) are being created
- Agency determines incorporation of e-sig will result in changes in retention period of e-signed record
- Incorporation of e-sig and/or changes in work processes significantly change the character of the record

# NARA's Future: ERA

Electronic Records Archives Program

# What is the size of the challenge?




Electronic Records Archives Program

# Critical Challenge

- The proven methods for preserving digital information across generations of technology are limited to the simplest formats
- Available methods are increasingly inadequate
- The market has failed to develop solutions.

Electronic Records Archives Program

# What do we need to do?

- Overcome technological obsolescence in a way that preserves demonstrably authentic records.
- Build a dynamic solution that incorporates the expectation of continuing change in information technology and in the records it produces.
- Find ways to take advantage of continuing progress in information technology in order to maintain and improve both performance and customer service

Electronic Records Archives Program

# NARA's Requirements

- Scale
- Variety
- Permanence

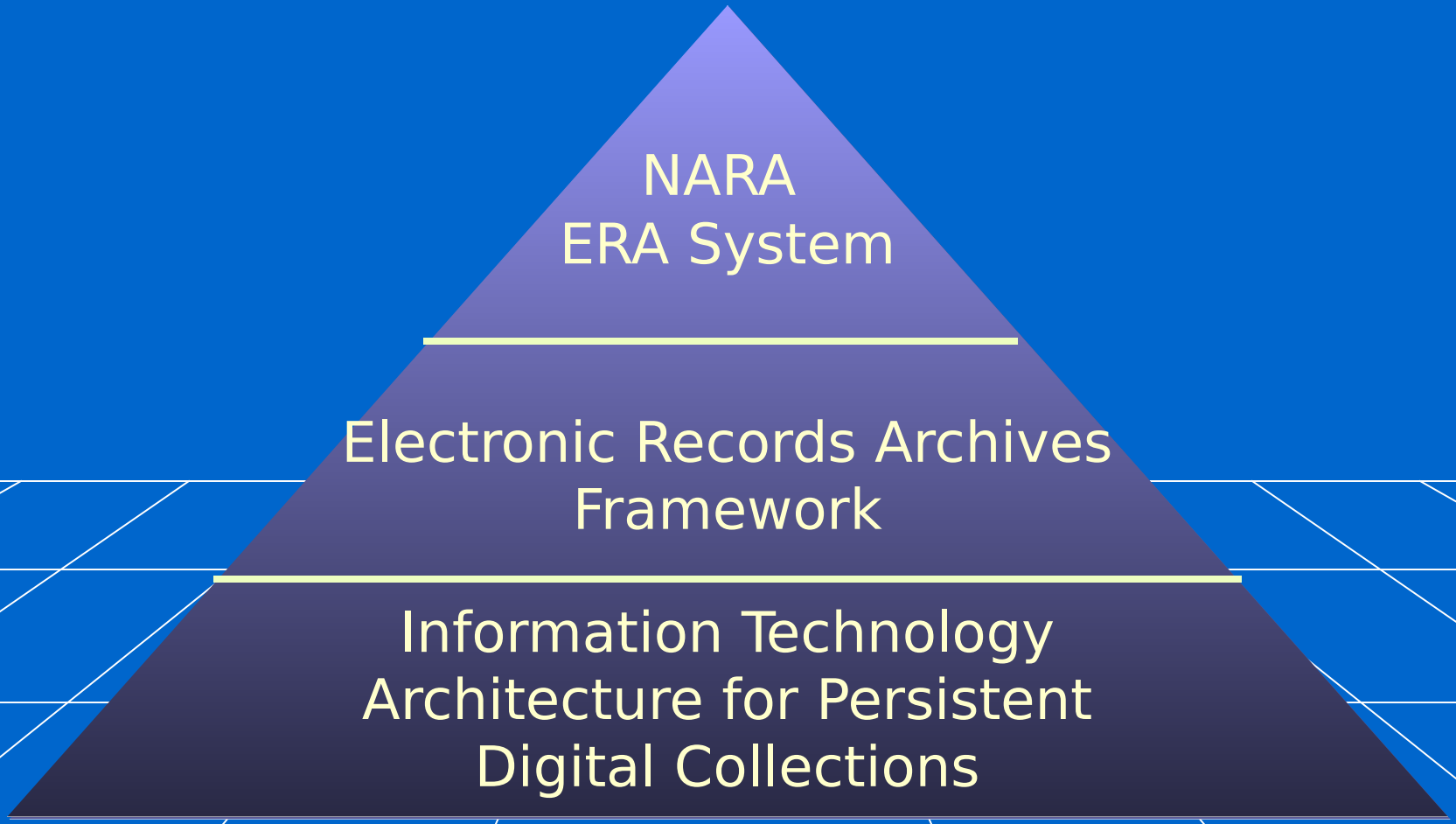
Electronic Records Archives Program

# The Electronic Records Archives

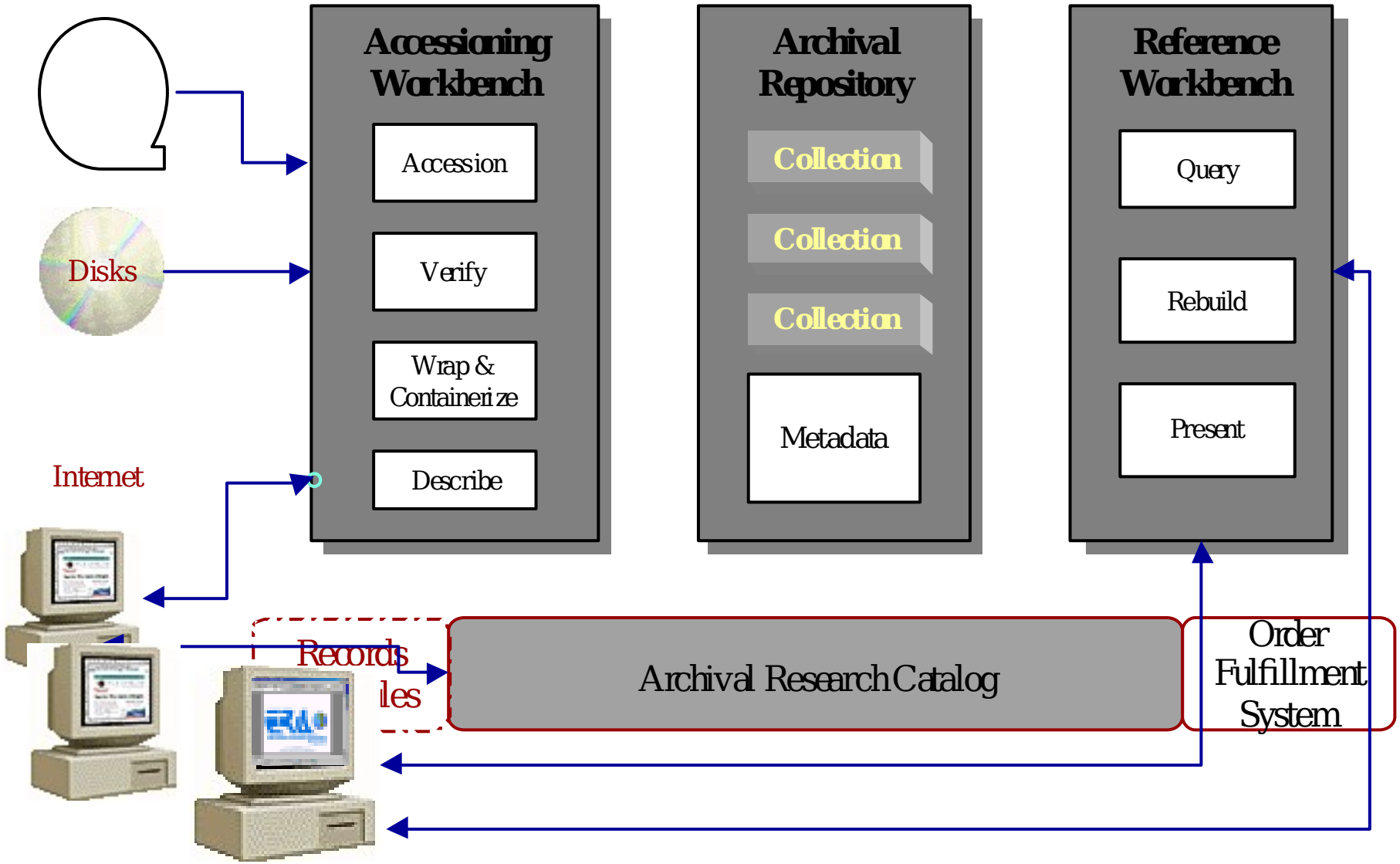
**The Electronic Records Archives** is a comprehensive, systematic, and dynamic **means** of providing continuing access to authentic electronic records over time.

Electronic Records Archives Program

# Electronic Records Archives Concept Design



# Electronic Records Archives: Virtual Workspaces



# Strategies for Digital Preservation

- **Existing Technologies**
  - Technology Preservation
    - Maintain original hardware and software
    - Imitate original technology
  - Data Format Migration
    - Version Migration
    - Standardize Formats

Electronic Records Archives Program

# Emerging Technologies

## Transformation to Persistent Form
## Persistent Object Preservation

Ingest and storage demonstration for several diverse collections of electronic records representing the following genres:

- E-mail
- Geospatial data
- Office automation products
- Databases
- Images

Access demonstrated for a few collections

Usenet e-mail example: 1 million message collected, ingested, stored, and made available for access in just over one day

# NARA Partnerships

- **Open Archival Information System** (OAIS) Reference Model
  - NASA, Consultative Committee on Space Data Systems
- **Distributed Object Computation Testbed** (DOCT)
  - Defense Advanced Research Projects Agency, U.S. Patent and Trademark Office
- **National Partnership for Advanced Computational Infrastructure** (NPACI)
  - National Science Foundation

Electronic Records Archives Program

# NARA Partnerships

**Presidential Electronic Records Processing Operati**
(PERPOS)
Army Research Laboratory, Georgia Tech Research In

**Archivist's Workbench**
NHPRC Grant to San Diego Supercomputer Center

**International research on Permanent Authentic Re**
**in Electronic Systems** (InterPARES)
7 international research teams, 10 national archives

# ERA Program Schedule

- Continue research in order to accumulate knowledge, experience, and metrics
- Develop system(s) at point where enabling technologies mature and are available on the market
- Prototypes, pilots, and operational components rolled out over next few years with a goal of  minimal production capability by 2005

Electronic Records Archives Program

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